

5090
Ser 09ER3GK/L4259
16 Jun 1994

From: Commander, Western Division, Naval Facilities Engineering Command
To: Distribution

Subj: RESPONSE TO COMMENTS ON THE DRAFT ENGINEERING EVALUATION/
COST ANALYSIS (EE/CA) FOR SITE 15, BUILDINGS 289, 301 AND 389,
NAVAL AIR STATION (NAS), ALAMEDA, CALIFORNIA, DTD 14 MARCH 1994.

Encl: (1) Response to Comments from the DTSC, RWQCB, CAC and Sierra Club on
Subject Document

1. Enclosure (1) contains our responses to comments received on the Draft Engineering Evaluation/ Cost Analysis (EE/CA) for Site 15 at NAS Alameda. If no additional comments are received in 15 days, the EE/CA will be finalized.
2. If you have any questions regarding the Navy response to comments, please contact Mr. George Kikugawa, Code 09ER3GK, (415) 244-2559; FAX (415) 244-2553.

Original signed by:

GARY MUNEKAWA
By direction

Distribution:

California Department of Toxic Substances Control (Attn: Tom Lanphar)
California Regional Water Quality Control Board (Attn: James Nusrala)
US Environmental Protection Agency (Attn: James Ricks)
Community Advisory Committee (Attn: Roberta Hough/ Lyn Stirewalt)
Sierra Club San Francisco Bay (Attn: William J. Smith)

Copy to (w/encl):

NAS Alameda (Attn: Lt. Mike Petouhoff)
NAS Alameda (Attn: Sherri Withrow) 2 copies
NADEP Alameda (Attn: Paul Pentony)
COMNAVBASE San Francisco (Attn: Randy Friedman)
PRC Environmental Management, Inc. (Attn: Duane Balch)
Montgomery Watson (Attn: Ken Leung)

1067

Blind copy to:

09ER, 09ER3, 09ER3GM, 09ER3GK,
09CMN, 09F2DP

Admin Record (w/3 copies)

Chron, blue, pink, green

WRITER: G. Kikugawa/T4A2GK/X2559

FILE: Alameda/NAS

**RESPONSE TO COMMENTS
ON
DRAFT ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) REPORT
FOR
SITE 15, BUILDINGS 289, 301 AND 389**

ALAMEDA NAVAL AIR STATION, ALAMEDA, CALIFORNIA

CLEAN Contract No. N62474-88-D-5086, Contract Task Order No. 0258

The Navy has prepared these responses to comments from:

- California Environmental Protection Agency - Department of Toxic Substances Control (DTSC)
- Regional Water Quality Control Board (RWQCB)
- Community Advisory Committee (CAC)
- Sierra Club

Following a 30-day public comment period, comments were received from DTSC, RWQCB, CAC, and Sierra Club on the draft EE/CA report for the Site 15 removal action at Naval Air Station (NAS) Alameda.

Comments are presented verbatim in bold typeface. The Navy's responses follow in normal typeface.

DTSC

Specific Comments

Comment No. 1: Section 1.0 - Introduction

The introduction should state clearly the reasons why a removal action is being conducted at this site.

Response: This section will be revised to include the following statements:

The Navy has determined that a removal action is appropriate at Site 15 based on consideration of the following factors as established in the Code of Federal Regulations Title 40 Part 300.415 (40 CFR 300.415).

- (i) Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, pollutants, or contaminants
- (iv) High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate
- (v) Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released

The removal action will focus on reducing the existing risk to human health and the environment by removing surface soils having elevated PCB and lead concentrations.

Comment No. 2: Section 2.2 - Current Use (page 2-2)

Please add that the area is fenced and has signs warning that this is a hazardous and contaminated area. The exact language of the signs should be included.

Response: This section will be revised to include the following statement:

Site 15 is enclosed by an approximately 8-foot-high, chain-link fence, and "Warning - PCB Contamination in Surface Soil, Unauthorized Personnel Prohibited" signs are posted.

Comment No. 3: Section 2.5 - Nature, Source, and Extent of Contamination (page 2-5, first paragraph)

Please add paint to the list of substances that have had lead as an additive. The Report states that the source of elevated lead at Site 15 is unknown; this is true. However, a potential source of the lead may be the lead paint applied to buildings at the site. The distribution of lead contamination correlates to the footprints of the buildings at Site 15.

Response: This paragraph will be revised to include the following statements at the end:

However, a potential source of lead may be the lead paint applied to buildings at the site. The distribution of elevated lead concentrations correlates to the footprints of the buildings at Site 15.

Comment No. 4: Section 2.6 - Potential or Actual Impacts on Surrounding Populations (page 2-6)

Please state the depth to groundwater at Site 15.

Response: As stated in Section 2.3.2.1 - Site Geology and Hydrogeology, the depth to groundwater at Site 15 ranges from 2.5 to 5.2 feet below ground surface (bgs); the average depth to groundwater is 3.7 feet bgs. This information will be referenced and restated in Section 2.6 - Potential or Actual Impacts on Surrounding Populations.

Comment No. 5: Section 2.7 - Justification of Removal Action

The justifications listed for carrying out a Removal Action as (sic) Site 15 should be more site specific. For example: Shallow groundwater at the site; workers in the area; surface transport of PCB-contaminated soil off the site; proximity of the Oakland Inner Harbor.

Response: This section will be revised to include the following statement:

A removal action is justified because (1) PCBs have been released, (2) elevated levels of PCBs and lead were detected in surface soils, (3) base personnel work in the area, (4) site groundwater is shallow, (5) surface transport of soil could carry PCBs and lead off site, and (6) Site 15 is close to the Oakland Inner Harbor.

Comment No. 6: Section 2.8 - Removal Action Objectives (page 2-8)

Please further define unacceptable human health risk at the proposed PCB soil cleanup level of 1 mg/kg.

Response: As stated in the U.S. Environmental Protection Agency's (EPA) "Guidance on Remedial Actions for Superfund Sites with PCB Contamination," EPA/540/G-90/007, August 1990, pp. 26-28:

The 1-mg/kg cleanup level is a preliminary remediation goal for sites where unlimited exposure under residential land use is assumed. The 1 mg/kg reflects a protective, quantifiable concentration for soil. Lower concentrations are not generally quantifiable and in many cases will be below background concentrations. A concentration of 1 mg/kg is generally the starting point for analysis at PCB-contaminated Superfund sites where land use is residential.

As stated in the EE/CA report, the proposed PCB soil cleanup level of 1 mg/kg is an interim cleanup goal for purposes of this removal action. The final PCB cleanup goal will be based on the human health and ecological risk assessment to be conducted during the remedial investigation/feasibility study.

Comment No. 7: Section 2.8 - Removal Action Objectives (page 2-8)

Please explain how the proposed cleanup goal of 130 mg/kg for lead was calculated using the Cal/EPA, Department of Toxic Substances Control Preliminary Assessment Guidance Manual (PEA Manual). The final PEA Manual was published January 1994.

Response: The final DTSC PEA Manual published in January 1994 states in Section 2.5.1.3 - Chemical Groups, Inorganic Lead (page 2-19) that:

For screening purposes, the Office of Scientific Affairs (OSA) has established that inorganic lead concentrations less than 130 ppm in soil constitute an acceptable health risk. This value was obtained using the spreadsheet model LEADSPREAD, which is described in guidance from OSA (DTSC 1992, Chapter 7) and conservative, screening level assumptions.

Comment No. 8: Section 2.8.2 - Determination of Removal Schedule (page 2-9)

The schedule requires updating. Because this EE/CA contains three preferred alternatives the Navy must provide public notice and a 30-day comment period for the chosen alternative. A public notification and 30-day public comment period of the Action Memorandum will satisfy the requirements of the selected alternative.

Also, a CEQA determination is necessary for this project. A Negative Declaration may be in order. If this is the case the public comment period for the Negative Declaration may correspond with the comment period of the Action Memorandum.

The schedule must include time for the Navy to respond to comments and make any necessary changes to the Implementation Work Plan.

Response: Section 2.8.2 - Determination of Removal Schedule will be updated. The Navy will prepare a public notification and provide a 30-day public comment period for the Action Memorandum and the chosen removal action alternative.

The Navy agrees that a CEQA determination and Negative Declaration may be necessary for this project. The California Environmental Protection Agency (Cal-EPA) Department of Toxic Substances Control (DTSC) will prepare the CEQA and Negative Declaration based as a result of the progress review meeting held on May 25, 1994. The CEQA and Negative Declaration will be made available for public review and comment in conjunction with the Action Memorandum public comment period (see above).

The updated schedule will include time for the Navy to respond to comments and make any necessary changes to the Implementation Work Plan.

Comment No. 9: Section 3.2.2 - Removal and Disposal Actions (page 3-4)

Material with PCB values which exceed the Soluble Threshold Limit Concentration (STLC) of 5.0 mg/l or the Total Threshold Limit Concentration (TTLC) of 50 mg/kg is considered a hazardous waste in accordance to California Code of Regulations, Title 22, Section 66261.24 (a) (2) (B).

Response: Sections 2.5 and 3.2.2 will be revised to include the above comment.

Comment No. 10: Section 4.2.2.4 - Alternative 4: Excavation, On-Site Solvent Extraction and Stabilization or Acid Washing, and On-Site Disposal (page 4-12), On-Site Solvent Extraction and Stabilization or Acid Washing (page 4-14), costs, and Appendix B (Table B-3)

On page 4-12 the EE/CA states that residual solvents, acids, and untreated wastes would generally contain highly concentrated contaminants that require disposal at an off-site incineration facility. Are the costs associated for incineration included in the estimated capital costs for implementing Alternative 4? Table B-3 does not include incineration as an item. Incineration is included in the costs estimates for Alternative 2 Excavation/On-Site Soil Washing/On-Site Disposal. Including incineration in the costs could increase the cost of Alternative 4, \$836,000.

Response: Section 4.2.2.4 - Alternative 4: Excavation, On-Site Solvent Extraction and Stabilization or Acid Washing, and On-Site Disposal and Appendix B (Table B-3) will be revised to include costs associated for incineration of residual solvents; acids, and untreated wastes containing highly concentrated contaminants as a result of the acid washing process. Incineration costs are currently not included in the estimated costs for implementing Alternative 4.

Comment No. 11: Section 4.3 - Comparative Analysis of Interim remedial Action Alternatives (page 4-19)

The EE/CA identifies Alternative 4 as one of the preferred alternatives. However, Alternative 4 is actually two alternatives. One with stabilization and the other with acid washing. These sub-alternatives are very different. The stabilization alternative would require the on-site disposal of stabilized lead. Stabilization is part of Alternative 3 and is discussed on page 4-10. There the EE/CA states, "However, backfilling the treated soil into the excavation reduces but does not eliminate the potential for any future releases to groundwater" and "Implementation of this alternative may only provide moderate degree of protection to both human health and the environmental (sic) on a long-term basis."

The EE/CA should make a distinction between these two sub-alternative in this concluding section.

Response: This concluding section will be revised to differentiate between and evaluate Alternative 4A (soil excavation, on-site treatment using solvent extraction and stabilization, and disposal on site) and Alternative 4B (soil excavation, on-site treatment using solvent extraction and acid washing, and disposal on site). Alternative 4A is eliminated because on-site disposal of stabilized lead does not provide adequate long-term protection for either human health or the environment.

Comment No. 12: **Section 4.3 - Comparative Analysis of Interim remedial Action Alternatives (page 4-19)**

The EE/CA should provide one single recommendation for the removal action.

Response:

The concluding section of the EE/CA report will be revised to state that Alternative 4B (soil excavation, on-site treatment using solvent extraction and acid washing, and disposal on site) is the preferred alternative for the removal action. Alternative 4A (soil excavation, on-site treatment using solvent extraction and stabilization, and disposal on site) is eliminated because on-site disposal of stabilized lead does not adequately protect both human health and the environment on a long-term basis. Alternative 6 (soil excavation and disposal at a Class I facility with or without treatment) is also eliminated because the EPA prefers treatment over land disposal approaches (Guidance on Conducting Non-Time-Critical Removal Actions Under CERCLA, U.S. EPA, August 1993) and states under CERCLA Section 121 Cleanup Standards:

that the off-site transport and disposal of hazardous substances or contaminated materials without treatment should be the least favored alternative remedial action where practicable treatment technologies are available.

RWQCB

General Comments

Comment No. 1:

A leachability study, preferably a column test, should be performed on the soils left in place after this removal action to assess the potential for soils with lead concentrations under 130 parts per million (ppm) to leach into the groundwater. The water used in this leachability study should have the pH of rain water. Leachability studies should be run on ten confirmatory soil samples. I agree with the report that the lead contamination at Site 15 is restricted to the shallow surface soils, and currently not present in the subsurface or the groundwater. However, the Navy shall still assess the potential risk that any remaining soil may pose to the groundwater at site 15. The groundwater is about 4 feet below ground surface, and site 15 is located only 300 feet from the Oakland Estuary. Therefore, contamination leaching into the shallow groundwater could adversely affect San Francisco Bay.

Response:

The Navy agrees that a leachability study be performed on the soils left in place after completion of this removal action to assess the potential for soils with lead concentrations under 130 ppm to leach into the groundwater. The Navy proposes to analyze 10 percent of the confirmatory soil samples collected for soluble lead using a modified waste extraction test (WET). The modification will require performing the leachability study using distilled water in place of sodium citrate in order to determine the leachability of residual soil at the site. The state of California STLC for soluble lead is 5.0 milligrams per liter (mg/L).

Comment No. 2:

The dates shown on the removal schedule showing when the Navy will submit the Final Action Memorandum and Final Implementation Work Plan shall be at least 60 days after the Draft of these two respective reports are submitted. There is only a 30 day spacing between deliverance of Draft and Final documents. Sixty days is needed to give the public and the agencies at least 30 days to comment on the Action Memorandum and the Implementation Work Plan, and some time for the Navy and the regulators to resolve the comments on the respective reports.

Response: This comment is addressed above in the Navy's response to DTSC's Comment No. 8.

Comment No. 3: Please state in the conclusions of this site 15 EE/CA Report that Remedial Action Alternative 4 (soil excavation, on-site treatment using solvent extraction and stabilization or acid washing, and disposal on site) is preferred to Alternative 6 (soil excavation and disposal at a Class I facility with or without treatment). The reason is that Alternative 6 is disposing the soil in a landfill, while Alternative 4 is disposing the soil on site. From a water quality standpoint, and from a landfill management standpoint, disposal at a Class I facility is not the preferred option. In addition, one of EPA's items on its checklist for evaluating the effectiveness of a remedial alternative is Alternatives to land disposal. (Review of Revised Draft of Non-Time-Critical Removal Action Guidance, U.S. Environmental Protection Agency, October 22, 1992, page 49).

Response: This comment is addressed above in the Navy's response to DTSC's Comment No. 12.

Specific Comments

Comment No. 1: Section 2.6 - Potential or Actual Impacts on Surrounding Populations

Ecological receptors should be mentioned in this summary. The second paragraph states that "PCBs and lead could affect the Oakland Inner Harbor given that the groundwater level is shallow and PCBs and lead may affect the groundwater." It follows that this section should mention the ecological receptors that inhabit the Oakland Inner Harbor.

Response: This section will be revised to mention that PCBs and lead could impact the Oakland Inner Harbor through site groundwater or surface migration. At present, no work has been performed in the vicinity of Site 15 to identify potential ecological receptors that inhabit the Oakland Inner Harbor. However, an ecological assessment has been proposed under the remedial investigation/feasibility study for NAS Alameda.

Comment No. 2: Section 2.8 - Removal Action Objectives (page 2-7 and 2-8)

Please add in this introductory section that confirmatory column test will be run for the remaining soil. See General Comment #1. This is necessary as the report says on the bottom of page 2-7, that one of the objectives of this interim removal action is to reduce the potential impacts of soil contaminants on the groundwater.

Response: This comment is addressed above in the Navy's response to General Comment No. 1.

Comment No. 3: Section 2.8 - Removal Action Objectives (page 2-8)

Please clarify whether the default cleanup goal of 130 ppm used by the Department of Toxic Substances Control (DTSC) will require further human health or ecological risk evaluation.

Response: The default cleanup goal of 130 ppm for lead is the interim cleanup goal for this removal action at Site 15. The final cleanup goals at this site will be based on the human health and ecological risk assessment to be conducted during the remedial investigation/feasibility study. The risk evaluation will be developed based on the residual concentrations remaining at Site 15 after completion of the removal action.

Comment No. 4: Section 2.8.2 - Determination of Removal Schedule

The Navy shall submit the Final Action Memorandum no less than 60 days after they submit the Draft Action Memorandum, which the agencies and public will review. Please see General Comment No. 2.

Response: This comment is addressed above in the Navy's response to DTSC's Comment No. 8.

Comment No. 5: Section 2.8.2 - Determination of Removal Schedule

The Navy shall submit the Final Implementation Work Plan no less than 60 days after they submit the Draft Implementation Work Plan, which the agencies and public will review. Please see General Comment No. 2.

Response: This comment is addressed above in the Navy's response to DTSC's Comment No. 8.

Comment No. 6: Figure 2-1 - Site Map for Site 15

Please draw the location of the elevated berm that exists between Site 15 and the Oakland Inner Harbor, on this site map.

Response: Figure 2-1 will be revised to show the location of the elevated berm between Site 15 and the Oakland Inner Harbor.

Comment No. 7: Figure 2-3 - Surface Sample Locations and Results, Total Lead, Site 15

The concentrations of lead observed in the groundwater at wells M-15-01, M-15-02, and M-15-03 shall be identified on this map. The values are in the very low parts per billion, and are fundamental to the argument that the lead contamination at site 15 is restricted to the shallow, vadose zone soils.

Response: Figure 2-3 will be revised to show the concentrations of lead detected in the groundwater at wells M-15-01 (<2.0 micrograms per liter [µg/L]), M-15-02 (<6.0 µg/L), and M-15-03 (<2.0 µg/L).

Comment No. 8: Section 4.2.1.1 - Effectiveness

Alternatives to land disposal should be an item under the objectives of evaluating the effectiveness of a remedial alternative. See General Comment No. 3.

Response: The effectiveness of a removal action alternative refers to its ability to meet the removal action objectives. These objectives will be revised in this section to include the U.S. EPA's preference of treatment over land disposal alternatives where practicable treatment technologies are available.

Comment No. 9: Section 4.2.2.5 - Alternative 5: Excavation and Off-Site Incineration, Cost Summary

Please provide some basis for the cost estimate of \$11 million for this remedial alternative. The Navy should estimate how much they would have to pay the incinerator per ton of waste.

Response: The detailed cost estimate and basis of the \$11 million for implementing Alternative 5 is provided in Appendix B (Table B-4). The incineration cost is \$1,320 per ton of waste.

Comment No. 10: Section 4.3 - Comparative Analysis of Interim Remedial Action Alternatives (page 19)

In the last paragraph, please state that Alternative 4 is the preferred option as it is an alternative to disposing of the soil in a landfill. See General Comment No. 3.

Response: This comment is addressed above in the Navy's response to DTSC's Comment No. 12.

CAC

General Comments

Comment No. 1: At the grass-roots level, I (Roberta Hough) have heard consistent and unequivocal opposition to excavation, transport and off-site disposal of contaminated soil. This is particularly true when incineration or landfilling without significant treatment for volume and toxicity reduction are the final disposition. Residents do not want hazardous waste transported through our community. There is probably equal concern regarding contributing to environmental racism, e.g. that the final disposal site adversely affects that neighboring community which has similar concerns about health and safety as any community but is politically under-represented or otherwise excluded from having the same choices as more affluent areas. This is specifically true at the IT operated Kasmalia dump in Kern county. Therefore, I suggest that Alternative 6 does not meet the community acceptance criterion of CERCLA.

Response: The Navy agrees. Please see the Navy's response to DTSC's Comment No. 12.

Comment No. 2: The Restoration Advisory Board for NAS Alameda convened just 30 days ago. We have not established a community co-chair nor procedures for agendaizing items for discussion. Alternative 6 was not emphasized during the brief presentation at the May 3 meeting. I (Roberta Hough) suggest that the preferred Alternative 4b could be implemented with community acceptance. However, should Alternative 4b not be selected, I (Roberta Hough) believe that further discussion is justified. The future landfill bans, current extensions notwithstanding, indicates general acknowledgment of the unsustainability of such an approach; they are not permanent solutions at the final destination. Also, other alternatives which would have community acceptance were dismissed without further evaluation ostensibly because they require a two-stage approach. The weight given to a lack of institutional history should be considered in light of economic conversion and the obvious interest in improving the CERCLA performance as seen in the current reauthorization discussions.

Response: The Navy's preferred removal action alternative is Alternative 4B (soil excavation, on-site treatment using solvent extraction and acid washing, and disposal on site). Please see above the Navy's response to DTSC's Comment No. 12.

Comment No. 3: In addition, the copy of this report made available through the information repository at the Alameda Main Branch Library did not include the request for comment letter with the report. This severely restricts the ability of the general public to even be aware of their

ability to comment on this action, much less make their opposition to the off-site disposal known.

Response: For future documents made available to the public for comment, the Navy will provide, with the document, a letter inviting the public to review and comment on the document, and identifying the comment period.

Specific Comments

Comment No. 1: Some bias is suggested in the report including overstating the Alternative 4b cost by 200 k\$ in the text, page 4-14.

Response: The true estimated cost for implementing each removal action alternative is presented in Appendix B. However, these costs were inadvertently not revised in the text, resulting in a discrepancy between costs in the text and those in Appendix B. This oversight will be corrected in the final EE/CA report.

Comment No. 2: Some bias is suggested in the report including concluding that "Overall, this alternative may be difficult to implement" when no rationale for this statement has been given for Alternative 4b (acid washing) only for 4a (stabilization), page 4-14; (It is not credible that space for the treatment facility is a significant obstacle at the 1526 acre base).

Response: This section will be revised to succinctly state that Alternative 4A may be difficult to implement given the rationale provided for Alternative 4A; whereas, Alternative 4B is implementable given the rationale provided for this Alternative 4B.

Comment No. 3: Some bias is suggested in the report including presenting a schedule which appears untenable when treatability studies are desirable to lower cost, page 2-9.

Response: The schedule provided in the EE/CA report will be updated to include time for performing and evaluating the results of treatability studies at part of the removal action implementation.

Comment No. 4: Some bias is suggested in the report including the without pretreatment option when the text suggests that the one Class I facility contacted would require pretreatment, page 4-17. It is unclear what incentive the landfill operator might have for not pretreating the soil.

Response: The Class I landfill requires development of a waste profile for incoming waste streams. Given the results of their profile and land disposal regulations, pretreatment for particular compounds may or may not be required prior to disposal. The Class I facility indicated that, based on the available Site 15 analytical data, it will accept the soil for disposal with pretreatment for elevated concentrations of lead only. Facility personnel indicated that the pretreatment process for lead would also effectively treat PCBs. It is assumed that upon completion of the pretreatment process for lead, no further post-treatment is required for land disposal.

Sierra Club

Comment No. 1: Cleanup Standards are Interim, Not Final

The proposed cleanup standards are reasonably protective for an interim action at this small, isolated, and little-used site. These levels may, however, be unsuitable for a final

remedial action. Should the recent and surprising discovery of elevated levels of PCBs in fish collected in the North Bay turn out to be caused by PCB-contaminated soil blowing into the Bay, the 1 mg/kg cleanup level for soil may need to be lowered for a final action. We are also concerned that recent epidemiological studies in urban areas with lead tainted soils suggest that lead levels much lower than 130 mg/kg are required to protect the health of children. A recreation area accessible to children is one possible future use for this site.

Response:

As stated in the EE/CA report in Section 2.8 - Removal Action Objectives, the removal action objectives at Site 15 are to mitigate the risk to human health and the environment from the potential exposure to soils with elevated PCB and lead levels, and to reduce the potential impacts of soil contaminants on groundwater. To address these objectives, the Navy proposes interim cleanup goals of 1 mg/kg for PCBs and 130 mg/kg for lead. The proposed cleanup goal of 1 mg/kg for PCBs is considered by the U.S. EPA as the level that would not pose an unacceptable human health risk under a residential scenario considering ingestion, inhalation, and dermal contact exposure pathways. The proposed cleanup goal of 130 mg/kg for lead is the default value used by the Cal-EPA DTSC which constitutes an acceptable human health risk and requires no further risk evaluation. These proposed cleanup goals are not the final cleanup levels for Site 15. The final cleanup goals at this site will be based on the human health and ecological risk assessment to be conducted during the remedial investigation/feasibility study. The risk evaluation will be developed based on the residual concentrations remaining at Site 15 after completion of the removal action.

Comment No. 2:

Cost - How Much for an Isolated Site?

As the design for the removal action is refined, the cost of the proposed alternative may increase beyond the estimate in the EECAR (Engineering Evaluation and Cost Analysis Report) to a level that is unreasonable for an interim action at an isolated site. The EECAR notes that the normal budget limit for interim actions conforming to guidelines in the Comprehensive Environmental Cleanup and Liability Act (CERCLA) is 2 million dollars. Pre-design estimates in the EECAR place the cost of this alternative well over this limit, at almost 2.5 million dollars. The estimated cost of this single action for a site that is unlikely to be a significant part of any short term reuse plan amounts to almost 10% of the entire environmental budget in the Base Cleanup Plan (BCP) for fiscal years 94 and 95 combined. If the cost of implementing this alternative rises substantially, other alternatives should be reconsidered. Cost estimates for this alternative involving solvent extraction and acid washing should be significantly more reliable after results of laboratory treatment studies become available.

Initial cost estimates for new processes are frequently too low and the proposed action includes two new processes, solvent extraction and soil washing. The EECAR cost estimate also omitted the cost of required treatability studies and of off-site disposal of treatment residuals. With two new processes, the cost of treatability studies could be significant, over \$100,000. The treatability studies may also show that the treatment process may generate a significant volume of residuals that will have to be disposed of off-site, at significant additional cost.

Alternative funding may be available to help defray the cost of demonstrating this innovative treatment and on-site reuse of soil, but application procedures for these funds would probably delay implementation. The U.S. EPA SITE program, a technology demonstration program, is one example of an alternative funding source.

Should costs of the solvent extraction and soil washing alternative escalate, I believe that capping of the site should be considered in addition to the interim removal action alternatives described in the EECAR. A temporary cap, such as asphalt for a parking lot, would stop the wind-borne spread of PCB contaminated soil and further slow leaching of PCBs and lead from the soil into the groundwater beneath the site. A cap would reduce leaching by stopping the percolation of rainwater through the soil.

Capping may become the preferred interim action if costs of the selected solvent extraction and soil washing alternative escalate significantly. Selection of capping would then make substantial funding available earlier to other high priority sites. Other high priority sites include those that would be more likely to be a significant part of a short term reuse plan or that are sources of toxic compounds that are migrating off-site. Examples of such sites include soil containing heavy metals outside of metal plating shops and the landfills that are leaching toxic metals and chemicals into the San Francisco Bay.

Although it may be difficult to justify the proposed removal action at this time solely on the basis of immediate cost-effectiveness for the ANAS, this removal action is also an investment in the Navy's future. If successful, this innovative approach to on-site management of soil containing lead and PCBs promises to reduce the Navy's exposure to future liabilities at off-site disposal facilities. Reduction of future liabilities is a significant advantage in this era of the doctrine of joint and several liability. This legal doctrine makes the Navy potentially responsible for all remedial expenses at any facility where it deposits Navy wastes, even if the Navy contributed only an insignificant fraction of the waste. Any reduction in the amount of waste shipped off-site reduces the Navy's exposure.

Response:

The statutory limits on removal actions specified in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) limits the money and time spent on removal actions to \$2 million and 12 months, respectively. The NCP provides guidance for Superfund sites; NAS Alameda is not a Superfund site. Therefore, these limits do not apply to NAS Alameda. The final EE/CA report will be revised accordingly.

The cost for performing solvent extraction and acid washing bench-scale studies is approximately \$20,000. The cost for incinerating highly contaminated residuals from the solvent extraction and acid washing processes is estimated at \$420,000. These costs will be included in the cost estimate for implementing Alternative 4B - soil excavation, on-site treatment using solvent extraction and acid washing, and disposal on site. Similarly, the costs for implementing other removal action alternatives will be revised to incorporate costs for bench-scale tests and incineration where applicable.

Capping would provide only limited protection to human health and the environment by stopping potential wind-borne spread of PCB-contaminated soil and reducing the potential for leaching of PCBs and lead from soil into site groundwater. However, the PCB and lead would remain on site and would require remediation some time in the future. Therefore, the Navy believes that it is more cost effective to address the PCBs and lead in surface soil under this removal action to facilitate land reuse.

EPA prefers treatment over land disposal approaches (Guidance on Conducting Non-Time-Critical Removal Actions Under CERCLA, U.S. EPA, August 1993) and states under CERCLA Section 121 Cleanup Standards:

that the off-site transport and disposal of hazardous substances or contaminated materials without treatment should be the least favored alternative remedial action where practicable treatment technologies are available.

Comment No. 3: Provide More Background Information in EECARs and Feasibility Studies.

As emphasized in the above section on cleanup costs, costs of interim actions must be considered within the context of the cleanup plan for the entire air station. Therefore, the cost analysis should include a brief summary of the environmental cleanup budget for the entire facility and an explanation of why a particular site is being chosen for interim action before other sites.

The cost analysis should discuss the benefits of an interim action as well as its monetary cost. The analysis should address the following questions:

- 1) How will the action reduce environmental risks?**
- 2) How will the action increase the value of the land?**

Since this is an interim action, the discussion of these questions need not be extensively documented. In many cases a simple relative ranking with other sites that could not be considered for interim actions would suffice. There are many community and government organizations in the San Francisco Bay Area with both interest and expertise in environmental and land use planning that would help with a relative ranking. The East Bay Conversion and Reinvestment Commission can supply general guidance for developing ranking criteria. The Reuse Authority for ANAS, the City of Alameda's Base Reuse Advisory Group, and your own Restoration Advisory Board can assist with actual ranking of the sites.

The inclusion in the EECAR of several readily available pieces of information and graphical aids would assist with the coordination of the remedial action and reuse plans. These include 1) a comparison of the cost per acre or square foot of cleaning up the property with the prevailing value of industrial, commercial, and residential real estate in the area; and 2) the inclusion of graphical schedules for implementation of both the interim action and the land use plan. Concerns about tentative schedules raising false expectations among local community could be addressed by carefully explaining the assumptions upon which the schedules are based. Careful explanation of these assumptions would be invaluable for protecting the Navy's credibility whether or not graphical schedules are included.

Response:

The Navy will consider whether a relative ranking system is necessary. The purpose of an EE/CA report is to evaluate treatment and disposal alternatives in order to perform a removal action. The interim cleanup goals for this removal action are based on a residential scenario, and thus, increasing land reuse value. Any information pertaining to this project will be given to the City of Alameda's Base Reuse Advisory Group upon request to assist in developing a base reuse plan.

A comparison of cost per acre is not included in this EE/CA report for Site 15. However, this may be performed for future EE/CA reports. The schedule presented in the EE/CA report provides a general timeframe for implementing the site removal action and will be updated in the final EE/CA report. A more accurate schedule will be provided at the beginning of the removal action field activities.

Comment No. 4:

Suggestions for Improving Community Acceptance

Besides providing interim action and land use as discussed in the previous section, the Navy can add several other items of information to EECARs and Feasibility Studies to increase community acceptance of remedial actions, such as that proposed for Site 15. Each planning document, either an attached cover letter or preferably in the document itself, should describe how the document and its parts, such as the executive summary, will be distributed and who has been asked to serve as reviewers. A clear explanation of the document distribution will enable reviewers to assure the Navy that all interested parties have been notified about the document and will facilitate coordination between reviewers.

Another suggestion for improving community acceptance is specific to actions involving reuse of soil on site. Since the public is more concerned about soil returned to a site in their neighborhood than soil sent to a landfill, it may be worth the additional cost to sample treated soil returned to a site more frequently than that sent to a landfill. I suggest that you increase sampling frequency for this reused soil to the equivalent of 1 sample per dump truck (about 1 for every 16 cubic yards). One sample for every dump truck is more reassuring than one sample for every 6 dump trucks (about 1 for every 100 cubic yards). The extra cost could be offset by increasing to 6 the number of samples per composite actually analyzed. The \$10,000 this additional sampling would cost is a relatively inexpensive insurance policy for a 2 million dollar project. Similarly, post excavation sampling of the area outside of the excavation, as well the excavation's side walls and base, would reassure the public that all contaminated soil had been removed.

Response:

These suggestions for adding several items of information to increase community acceptance of remedial actions are more appropriate to a feasibility study (FS) than to an EE/CA. A copy of the Navy's cover letter including the distribution list will be provided with documents made available for public review and comment.

The Navy preferred removal action alternative (Alternative 4B - soil excavation, on-site treatment using solvent extraction and acid washing, and disposal on site) includes reuse of soil on site. Based on professional judgement and experience, the Navy considers a sampling frequency for the reused soil of 1 sample for every 100 cubic yards as sufficient.

The Navy proposes no post-excavation sampling of the area beyond the excavation because there is sufficient information collected during pre-excavation sampling on these areas to demonstrate that the site removal action objectives have been met.